CLAIM AMENDMENTS

Please cancel claims 8, 12, 20, 21, 23, 24 without prejudice or disclaimer.

Please add new claims 29 and 30.

1. (Currently Amended) An isolated polypeptide ~~comprising an amino acid sequence~~ selected from the group consisting of:

a) a polypeptide comprising an amino acid sequence ~~selected from the group consisting~~ of SEQ ID NO:1~~-2~~,

b) a polypeptide comprising a naturally occurring amino acid sequence having at least 90% sequence identity to ~~an~~ the amino acid sequence ~~selected from the group consisting~~ of SEQ ID NO:1~~-2~~, and

c) a biologically active fragment of a polypeptide comprising ~~an~~ the amino acid sequence ~~selected from the group consisting~~ of SEQ ID NO:1~~-2, and~~

~~d) an immunogenic fragment of an amino acid sequence selected from the group consisting of SEQ ID NO:1-2~~.

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2. (Currently Amended) An isolated polypeptide of claim 1 ~~selected from the group consisting~~ comprising an amino acid sequence of SEQ ID NO:1~~-2~~.

3. (Original) An isolated polynucleotide encoding a polypeptide of claim 1.

4. (Original) An isolated polynucleotide encoding a polypeptide of claim 2.

5. (Currently Amended) An isolated polynucleotide of claim 4 comprising the sequence ~~selected from the group consisting~~ of SEQ ID NO:3[[-4]].

6. (Original) A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 3.

7. (Original) A cell transformed with a recombinant polynucleotide of claim 6.

8. (Canceled)

9. (Original) A method for producing a polypeptide of claim 1, the method comprising:

a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 1, and

b) recovering the polypeptide so expressed.

10. (Original) An isolated antibody which specifically binds to a polypeptide of claim 1.

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11. (Currently Amended) An isolated polynucleotide ~~comprising a polynucleotide sequence~~ selected from the group consisting of:

a) a polynucleotide comprising a polynucleotide sequence selected from the group consisting of SEQ ID NO:3[[-4]],

b) a polynucleotide comprising a naturally occurring polynucleotide sequence having at least 70% sequence identity to ~~a~~ the polynucleotide sequence selected from the group consisting of SEQ ID NO:3[[-4]],

c) a polynucleotide ~~sequence~~ complementary to a polynucleotide of a),

d) a polynucleotide ~~sequence~~ complementary to a polynucleotide of b), and

e) an RNA equivalent of a)-d).

12. (Canceled)

13. (Original) A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:

a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and

b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

14. (Original) A method of claim 13, wherein the probe comprises at least 60 contiguous nucleotides.

15. (Original) A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:

a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and

b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

16. (Currently Amended) A ~~pharmaceutical~~ composition comprising an effective amount of a polypeptide of claim 1 and a pharmaceutically acceptable excipient.

17. (Currently Amended) A ~~pharmaceutical~~ composition of claim 16, wherein the polypeptide comprises ~~an~~ the amino acid sequence ~~selected from the group consisting~~ of SEQ ID NO:1~~-2~~.

18. (Currently Amended) A method for treating a disease or condition associated with decreased expression of functional DETX, comprising administering to a patient in need of such treatment the ~~pharmaceutical~~ composition of claim 16.

19. (Original) A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 1, the method comprising:

a) exposing a sample comprising a polypeptide of claim 1 to a compound, and

b) detecting agonist activity in the sample.

20. (canceled)

21. (canceled)

22. (Original) A method for screening a compound for effectiveness as an antagonist of a polypeptide of claim 1, the method comprising:

a) exposing a sample comprising a polypeptide of claim 1 to a compound, and

b) detecting antagonist activity in the sample.

23. (Original) A pharmaceutical composition comprising an antagonist compound identified by a method of claim 22 and a pharmaceutically acceptable excipient.

24. (Original) A method for treating a disease or condition associated with overexpression of functional DETX, comprising administering to a patient in need of such treatment a pharmaceutical composition of claim 23.

25. (Original) A method of screening for a compound that specifically binds to the polypeptide of claim 1, said method comprising the steps of:

a) combining the polypeptide of claim 1 with at least one test compound under suitable conditions, and

b) detecting binding of the polypeptide of claim 1 to the test compound, thereby identifying a compound that specifically binds to the polypeptide of claim 1.

26. (Original) A method of screening for a compound that modulates the activity of the polypeptide of claim 1, said method comprising:

a) combining the polypeptide of claim 1 with at least one test compound under conditions permissive for the activity of the polypeptide of claim 1,

b) assessing the activity of the polypeptide of claim 1 in the presence of the test compound, and

c) comparing the activity of the polypeptide of claim 1 in the presence of the test compound with the activity of the polypeptide of claim 1 in the absence of the test compound, wherein a change in the activity of the polypeptide of claim 1 in the presence of the test compound is indicative of a compound that modulates the activity of the polypeptide of claim 1.

27. (Original) A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 5, the method comprising:

a) exposing a sample comprising the target polynucleotide to a compound, and

b) detecting altered expression of the target polynucleotide.

28. (Original) A method for assessing toxicity of a test compound, said method comprising:

a) treating a biological sample containing nucleic acids with the test compound;

b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 11 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 11 or fragment thereof;

c) quantifying the amount of hybridization complex; and

d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.

29. (New) A microarray wherein at least one element of the microarray is a polynucleotide of claim 11.

30. (New) A method of generating an expression profile of a sample which contains polynucleotides, the method comprising:

a) labeling the polynucleotides of the sample,

b) contacting the elements of the microarray of claim 29 with the labeled polynucleotides of the sample under conditions suitable for the formation of a hybridization complex, and

c) quantifying the expression of the polynucleotides in the sample.